



Lung surfactant compositions are provided which can form a swelling phase when dispersed in a medium containing electrolytes. Hereby, a more active spreading of the lung surfactant into the alveoli can be obtained after administration to the lungs. Further provided are a pharmaceutical composition and a pharmaceutical kit comprising a lung surfactant composition as well as to a method for the treatment, prevention and/or diagnosis of respiratory distress syndrome or other pulmonary diseases that are associated with a deficiency of a lung surfactant.